Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte SHIGEKI TAKAHASHI and NIHEI KAISHITA

Appeal No. 2002-0472
Application No. 09/109,407

HEARD: August 13, 2002

Before ABRAMS, McQUADE and BAHR, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Shigeki Takahashi et al. appeal from the final rejection of claims 1 through 4, 9, 10 and 14 through 24. Claims 6 through 8, 11 through 13, 25 and 26, the only other claims pending in the application, stand objected to as depending from rejected base claims.

THE INVENTION

The invention relates to "an apparatus and method for aligning a multiplicity of chip parts in a row and delivering the

chip parts in sequence" (specification, page 1).[1] Representative claims 1 and 17 read as follows:

1. A part-aligning apparatus comprising:

a part-holding chamber for accommodating a number of chip parts, said part-holding chamber having a bottom having an inner surface;

a chute groove formed at least in the inner surface of the bottom of said part-holding chamber and having a closed bottom surface, said chute groove serving to orient chip parts in a given direction and cause said chip parts to slide successively downward;

a gate port formed at the lower end of said chute groove and permitting the chip parts sliding downward in a given orientation along said chute groove to pass in succession;

a discharge passage for aligning the passed chip parts in a line to discharge the passed chip parts; and

a rotary impeller rotatably held in said part-holding chamber and equipped with blades having front end portions dimensioned so as to pass over said gate port, said blades being rotated in such a direction that a chip part halted in an abnormal orientation in said gate port is displaced in a direction different from a direction in which the chip parts are discharged, thereby preventing said abnormally oriented chip part from clogging the gate port.

17. A method of aligning chip parts, comprising the steps of:

introducing chip part into a parts-holding chamber;

receiving the chip parts into a chute groove having a closed bottom surface;

sliding said chip parts downward in said chute groove;

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[1] The appellants' specification (see page 6) indicates that the chip parts are electronic in nature.

passing said chip parts through a gate port in series providing that said chip parts have a given orientation within said chute groove;

aligning said passed chip parts in a line for discharge after said chip parts pass through said gate port; and

rotating a rotary member to urge any chip part halted in an abnormal orientation in said gate port toward a direction different from a direction in which said chip parts are discharged, thereby preventing said gate port from becoming clogged.

THE PRIOR ART

The references relied on by the examiner to support the final rejection are:

Cameron	1,600,715	Sept. 21, 1926
Risser	1,807,673	June 2, 1931
Bryan, Jr. (Bryan)	4,014,460	March 29, 1977

THE REJECTIONS

Claims 1 through 4, 9 and 14 through 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Risser in view of Cameron.

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Risser in view of Cameron and Bryan.

Attention is directed to the appellants' main and reply briefs (Paper Nos. 19 and 22) and to the examiner's final rejection and answer (Paper Nos. 14 and 20) for the respective

positions of the appellants and the examiner with regard to the merits of these rejections.

DISCUSSION

Risser, the examiner's primary reference, discloses a cork feeding device comprising a hopper 1 for holding a plurality of corks, a plate 3 forming a front wall of the hopper 3, a plate 5 forming a bottom wall of the hopper 3, a drum 6 rotatably mounted within the hopper 1, a discharge groove 12 on the periphery of the drum 6 and a complementary notch 13 on the bottom edge of the plate 3 which cooperate to form an outlet through which the corks drop when properly arranged within the discharge groove 12, helical grooves 16 having front edges 17 on the periphery of the drum 6 at either side of the discharge groove 12 for urging corks toward the groove and for continuously agitating and stirring the corks within the hopper 3, and a discharge chute 19 for sequentially receiving the corks from the outlet. In use,

> [a]s the grooved portions [of the drum] pass under the edge of the plate 5, the corks are raised and also urged toward the discharge groove 12 by the angularity between the grooves 16 and the edge of the wall 5, without danger of cutting or abraiding [sic] the corks. Then, when a cork becomes positioned longitudinally in the discharge [groove], it slides down over the arc of the drum and drops out through the outlet into the discharge chute 19, the wall 3 cooperating with the drum to hold back the corks which are not registered in the discharge groove [page 2, lines 28 through 40].

Cameron, applied in combination with Risser to reject independent claims 1 and 17, discloses a cap feeding mechanism comprising a cap hopper 6, a rotatable cylinder 14 for receiving caps from the hopper, and an elongated delivery chute for discharging caps from the cylinder. The delivery chute has an arcuate portion 29, composed of a grooved plate 32 and a side wall 33, and a straight portion 31.

The examiner's rejection of independent claims 1 and 17 rests on the following rationale:

> [Risser's] Rortary [sic] impeller 6 with blades 17 return misoriented articles from groove 13 within chamber 1. The article being handled is immaterial because the structures and functions are equivalent. It would have been obvious to replace short chute 13 of Risser with the longer groove chute 33 of Cameron. The exit from the chute 33 is the gate port and chute 19 of Risser or chute 31 of Cameron is a discharge passage [final rejection, page 2].

This rejection is unsound for at least two reasons.

To begin with, there is nothing in the combined teachings of Risser and Cameron which would have suggested the foregoing combination. The examiner has not cogently explained, nor is it even remotely apparent, why the artisan would have been motivated to replace Risser's notch 13 with the elongated delivery chute disclosed by Cameron.

Furthermore, even if so combined, the references would not account for all of the limitations in claims 1 and 17. The examiner's apparent finding that Risser's drum 6 and its helical edges 17 meet the limitations in claim 1 relating to the rotary impeller and its blades is without merit. In short, the helical edges 17 do not constitute blades having front end portions dimensioned so as to pass over a gate port as required by the claim. The proposed combination also lacks response to the chip part limitations in independent claim 17. The examiner's position that these limitations are immaterial because the structures and functions are equivalent has no basis in law.

Thus, the combined teachings of Risser and Cameron do not justify a conclusion that the differences between the subject matter recited in independent claims 1 and 17 and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claims 1 and 17, and dependent claims 2 through 4, 9 and 14 through 16 and 18 through 24, as being unpatentable over Risser in view of Cameron

Since Bryan's disclosure of a railroad spike orienting and positioning system does not cure the foregoing flaws in the

Risser-Cameron combination relative to parent claim 1, we also shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claim 10 as being unpatentable over Risser in view of Cameron and Bryan.

SUMMARY

The decision of the examiner to reject claims 1 through 4, 9, 10 and 14 through 24 is reversed.

REVERSED

NEAL E. ABRAMS Administrative Patent Judge	)
JOHN P. McQUADE Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)

JPM/gjh

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APJ McQUADE

APJ ABRAMS

APJ BAHR

REVERSED

Heard/3 judge conference

June 4, 2003